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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,052	11/23/2001	Hajime Homma	041514-5368	4465

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EXAMINER

TRAN, HENRY N

ART UNIT PAPER NUMBER

2629

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/992,052

Applicant(s)

HOMMA, HAJIME

Examiner

Henry N. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-9 and 13-18 is/are allowed.
- 6) ☒ Claim(s) 1, 11, 19 and 20 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Office Decision on Petition under § 1.181 mailed 6/8/06 has placed the RCE and preliminary amendment filed November 7, 2005 (and resubmitted on petition filed February 28, 2006) in condition for Continued Examination.

Since this application is eligible for the transitional procedure of 37 CFR 1.129(a), and the fee set forth in 37 CFR 1.17(r) has been timely paid, the finality of the previous Office action is hereby withdrawn pursuant to 37 CFR 1.129(a). Applicant's Preliminary Amendment filed with the RCE under 37 C.F.R. § 1.114 received on February 28, 2006 has been entered. Claims 1-9 and 11-20 are currently pending in this application. Applicant's Remarks have been fully considered with the results as follows.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1, 11, 12, 19 and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

The claimed limitations: "applying sustaining alternating pulses across neighboring ones of said first and second electrodes" recited in the based claims 1, 11, 19 and 20 was not described

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in the specification. The claimed term "sustaining alternating pulses" does not appear in the Specification. The examiner is unclear how sustaining alternating pulses are applied across neighboring first and second electrodes. According to the conventional plasma driving techniques, as understood by the examiner, sustaining pulses of specific waveforms are applied alternately to the particular scanning electrodes and sustaining electrodes; that results in sustaining discharges; and an image is displayed.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1, 11, 12, 19 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 11, 12, 19 and 20 recite the limitations: "applying sustaining alternating pulses across neighboring ones of said first and second electrodes" and "sustaining alternating pulses". There are insufficient antecedent basis for these limitations in the claims or the specification.

For the purpose of this Office action, the examiner assumes that the limitations: "applying sustaining alternating pulses across neighboring ones of said first and second electrodes" is changed to --applying sustaining pulses alternately to the neighboring ones of said first and second electrodes--; and the "sustaining alternating pulses" is changed to --sustaining pulses--.

Applicant is required to response to said assumption in reply to this Office action.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 11, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanazawa et al (U.S. Patent No. 6,559,814, hereinafter referred to as "Kanazawa '814") in view of Kanazawa (U.S. Patent No. 5,835,072, hereinafter referred to as "Kanazawa '072").

Kanazawa '814 teaches methods of driving a plasma display panel (PDP) 40 having a plurality of row electrode sets, each including two first electrodes, e.g., X1 and X2, and one second electrode interposed between said first electrodes, e.g., Y1, the first electrodes and the second electrode respectively acting as scanning electrodes and a sustaining electrode, or vice versa, and said second electrode interposed between neighboring display cells such that said second electrode is shared by said neighboring display cells, wherein said neighboring display cells are adjacent in a direction intersecting with a direction where said scanning electrodes and sustaining electrode extend, see Figs. 7 and 11, the method comprising the steps of: executing sustaining discharge of said neighboring display cells at an interval of one cycle alternately (display cells of the odd-number lines are displayed in the first field; and display cells of the even number lines are displayed in the second field; wherein the field having an interval or a duration 16.6 msec; see Figs. 9-11; and col. 7, lines 31-54.

However, Kanazawa '814 does not teach the steps of: (i) changing at least one condition selected from the group consisting of pulse width and interval of said sustaining pulses in

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relation to changes in polarity of said sustaining pulses (claims 1 and 20); or (ii) changing voltage of said sustaining pulses in relation to every change in polarity of said sustaining pulses (claims 11 and 19).

Kanazawa '072 teaches methods of driving a DPD comprising the steps of: (i) changing at least one condition selected from the group consisting of pulse width and interval of said sustaining pulses in relation to changes in polarity of said sustaining pulses ("the duration of a sustaining pulse must be made longer"; see col. 7, lines 18-34; or (ii) changing voltage of said sustaining pulses in relation to every change in polarity of said sustaining pulses ("a sustaining discharge pulse assumes three values"; see Fig. 12; and col. 9, line 66).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of changing the interval or the value of the sustaining pulses as taught by Kanazawa '072 in the Kanazawa '814 device because this would provide an improved PDP capable of providing stable discharge with brighter display; see Kanazawa '072, col. 7, lines 15 and 30. By this rationale, claims 1, 11, 19 and 20 are rejected.

Allowable Subject Matter

8. Claims 2-9 and 13-18 are allowed.

9. Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. Applicant's arguments provided in pages 15-18 of the Amendment filed 2/28/06 with respect to claims 1 and 11 have been considered but are moot in view of the new grounds of rejection discussed above.

11. Applicant's arguments provided in pages 15-18 of the Amendment filed 28/06 with respect to the claimed limitations: (i) changing at least one condition selected from the group consisting of pulse width and interval of said sustaining pulses in relation to changes in polarity of said sustaining pulses (claim 1); or (ii) changing voltage of said sustaining pulses in relation to every change in polarity of said sustaining pulses (claim 11) have been fully considered and they are found not persuasive because Kanazawa '072 teaches the claimed limitations as discussed above (see item 7).

Conclusion

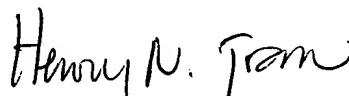
12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. It's U.S. Patent No. 7,023,406, which teaches PDP driving methods having the step of applying sustaining pulses that have changing pulse widths; see Fig. 2.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry N. Tran whose telephone number is 571-272-7760. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BIPIN H. SHALWALA can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Henry N Tran
Primary Examiner
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HT

6/14/06